

## Portland Harbor Source Control Recontamination Evaluation Strategy

We last conferred on March 16, 2012 to look at the bigger picture for Recontamination Evaluation in Portland Harbor and discussed expectations for format, partnership, and follow-through. DEQ agreed to re-craft the outline below and provide a “flow chart” on elements and timelines. EPA agreed to have CDM look at site-level recontamination evaluation/loading analysis and provide “standard protocols” for a common understanding of conducting a site-level recontamination evaluation and assist regulators in evaluating the approach.

### POINTS OF AGREEMENT:

1. It is desirable to have a consistent approach (EPA lead or DEQ lead) for directing/conducting REs in PH.
2. There are both qualitative and quantitative elements in an RE. Most lines of evidence that we have are qualitative.
3. The PH-wide RE will initially be a “screening level” RE, provided by DEQ to EPA before EPA’s Proposed Plan. Discussion of individual site-level REs completed by that time will be included. The RE will be largely qualitative.
4. The robustness of the PH-wide RE can be enhanced over time with more quantitative information and details from the Remedial Design phase of EAs and the overall PH remedies.

The goals of today’s call are: 1) to discuss comments on DEQ’s RE Elements & Timeline, DEQ’s proposed Contents of the Screening Level RE (for Proposed Plan), and CDMs draft ppt on PH Site-Level RE Framework and, 2) ponder remaining questions/issues so that we are all on the same page as to how we will jointly work through the requirement to consider the potential for post-remedy recontamination in PH.

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### OBJECTIVES

1. The aim of conducting Recontamination Evaluation (RE) in Portland Harbor is to ensure that the river, and particularly river sediment, will not be recontaminated following implementation of the in-water sediment action remedies.
  - a. An RE uses lines of evidence and specific tools to estimate the potential for recontamination from uplands (stormwater, groundwater, and erodible banks) and in-water (upstream bedload, remedial dredging).
    - I. At specific sites
    - II. In regional areas (AOPCs/SMAs, Outfalls (specific or grouped), restoration sites).
    - III. On a harbor-wide basis.
  - b. REs should be designed such that it can be revisited to confirm the predictions, verify effectiveness of upland SCMs implemented, and identify new threats.
  - c. Additional monitoring/data collection of sediment, water & biota will be necessary to confirm predictions.
2. DEQ and EPA will each lead REs under different circumstances, using the jointly developed consistent approach. Rich Muza is EPA Lead and Alex Liverman is DEQ lead.

3. In alignment with the JSCS, EPA Contaminated Sediment Remediation Guidance (2005), and EPA OSWER Directive 9285.6-08, a “lines of evidence” approach will be utilized for REs, based on both qualitative and quantitative data and analysis.
  4. Development of appropriate tests may be needed to confirm predictions or trigger corrective actions to avoid recontamination (on site, regional area, and harbor-wide scales).
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## RECONTAMINATION EVALUATION ISSUES FOR CONSIDERATION

### A. What will the format of the RE be and how will it be integrated into EPA’s decisions?

- 1) EPA’s Guidance (2005) indicates that the RE should be complete prior to implementation of in-water sediment actions.
  - i. DEQ anticipates preparing a “Milestone-like Source Control Summary Report” that includes the “screening level” RE, to be submitted to EPA Summer 2014 (prior to EPA’s Proposed Plan being released) – *see draft proposed Contents*.
  - ii. The “screening level” RE will include an adaptive management strategy.
    - a) On-going monitoring data (through PH 1200Z permits, remedy evaluation & maintenance, etc.) to trigger re-evaluation or corrective action.
    - b) Identify areas of uncertainty, unique hydraulics, representative SMAs, etc. to focus on.
    - c) Should be integrated into EPA’s monitoring of remedies required per EPA 2005 Guidance.
      - I. MNR – sediment accumulation rates, contaminant degradation rates/products, transport, contaminant levels (sediment, water, tissue), biotic recovery
      - II. Caps – construction specs met, bathymetry (thickness & stability over time), core chemistry (confirm isolation/no breakthrough), biological, cap surface recontamination
      - III. Dredging – residuals (sediment, benthics, bioaccumulatives, tissues), recontamination of sediment or biota.
  - iii. DEQ anticipates the RE elements will be addressed in EPA’s Proposed Plan.
    - a) If significant recontamination potential is found at a site, esp. where total control is not attainable, EPA led SCMs may be needed as part of the response action.
    - b) If sediment actions will result in significant benefits to human health or the environment, sediment actions should go forward despite on-going source risks.

iv. DEQ and EPA will coordinate to refine the RE and add robustness by applying more quantitative information.

a) Detail developed through the Remedial Design phase of site EAs and the PH remedies.

b) Partnering with the City on monitoring for industrial permit discharges, evaluation of MS-4 discharges, and OF/SMA/site specific loading analyses/modeling.

B. When does DEQ or EPA take the lead or partner on REs?

1) DEQ Lead Situations

- i. At some Medium priority pathway(s) upland sites – determination if source control is necessary
- ii. Evaluation of proposed upland site specific source control design and effectiveness confirmation – if there is uncertainty as to anticipated effectiveness of the proposed measure or design

2) EPA Lead Situations

- i. Early action sites – EPA has required the implementing party to conduct a RE of upland and to some extent in-water sources.
- ii. RD/RA – Evaluation of upland and in-water sources.
  - a) Riverbank component (conducted by the AOPC/SMA performing parties with EPA as the lead)
  - b) In-water remedy selection, esp. dredging components
- iii. On-going effectiveness monitoring & additional sampling and analysis to verify recontamination evaluation predictions.

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MODELING ISSUES FOR CONSIDERATION

*See Addendum specific to SEDCAM issues for consideration.*